



Maintenance Planning & Work Control
in the Oil & Gas



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Introduction:

Lower revenues due to lower oil and gas prices have placed equipment life-cycle costs under the Maintenance management spotlight like never before. Maintenance Managers are faced with the challenge to deliver the same levels of equipment safety, reliability, and availability with smaller budgets. This course introduces the practical tools and practices that Oil & Gas Industries need to adopt to drive down their equipment life-cycle costs in practical ways.

This course emphasizes the most effective strategies, policies, tactics, and practices that are needed to ensure the reliability, integrity, and durability of the physical assets through their life-cycle by proper planning and control of the Maintenance activities

Targeted Groups:

- Planners
- Supervisors
- Engineers
- Reliability Engineers
- Maintenance Team Leaders and Managers
- Operations Team Leaders and Managers

Course Objectives:

At the end of this course the participants will be able to:

- Understand the Failure mechanisms of Oil and Gas Assets
- Identify the necessary work for Assets life maximization
- Apply the correct type of maintenance for each asset
- Schedule work activities
- Control time, budget and scope during maintenance
- Assess the performance of Maintenance

Targeted Competencies:

- Failure and Degradation characteristics of Oil and Gas assets
- Oil and Gas asset classification into the criticality matrix for work identification
- Failure and degradation of assets
- Prioritization of activities and correlation of Organization Structural Domain with Work Breakdown structure
- Schedule activities
- Proactive Practices and Tools to Reduce Maintenance Costs
- Failure Analysis to Focus Cost Reduction Efforts
- Work Management to Improve Resource Efficiency

Course Content:

Unit 1: Maintenance Types and Asset Pairing:

- Definitions of Maintenance, Asset Management and Reliability
- Material failure and degradation
- Preventive-Predictive Maintenance
- Reliability Centered maintenance and the failure rate mathematics
- Life cycle costs and maintenance

Unit 2: Planning -WBS-OBS:

- Work Order System WO for Planning
- Work Breakdown Structure WBS
- Organization Breakdown Structure OBS
- Materials planning
- Workforce planning

Unit 3: Scheduling Principles:

- Programmed Preventive Maintenance Intervals
- Condition-based Maintenance Intervals
- Optimization of General Overhauls and maintenance period in the life cycle of Plants
- Critical Path Method CPM
- PERT analysis

Unit 4: Control of Time, Costs, and Work Quality:

- Monitor time domain using Gantt charts
- Techniques to Keep under budget
- Contingency and Management reserve
- Acceptance of work scope according to ISO/API standards

Unit 5: Maintenance Planning and Work Control Performance Analysis:

- Management of information flow
- Performance Indicators
- Workload Performance Indicators
- Planning Performance Indicators
- Effectiveness and Cost Performance Indicators
- Maintenance data archiving
- Reports to management